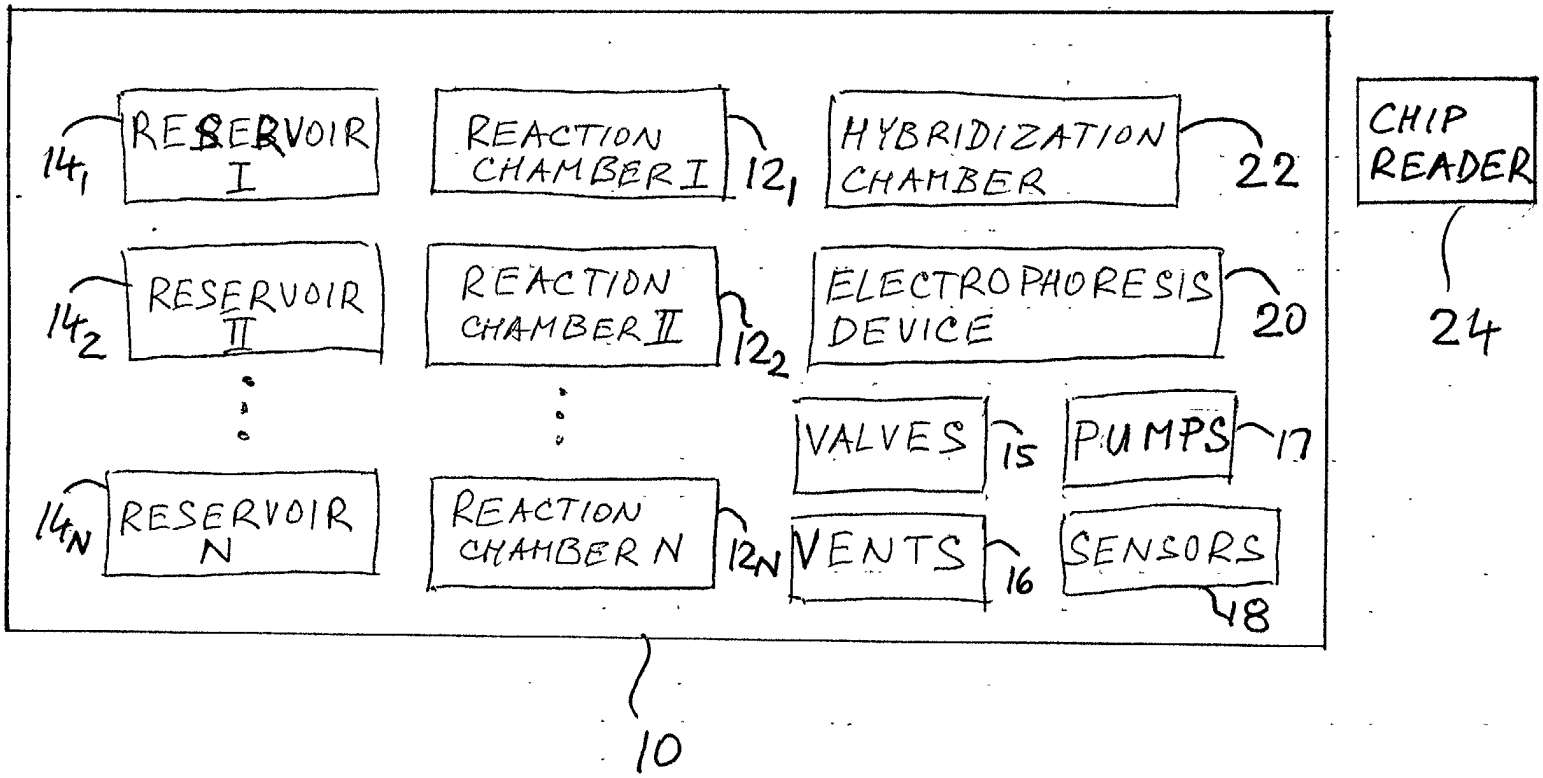

FIG. 1

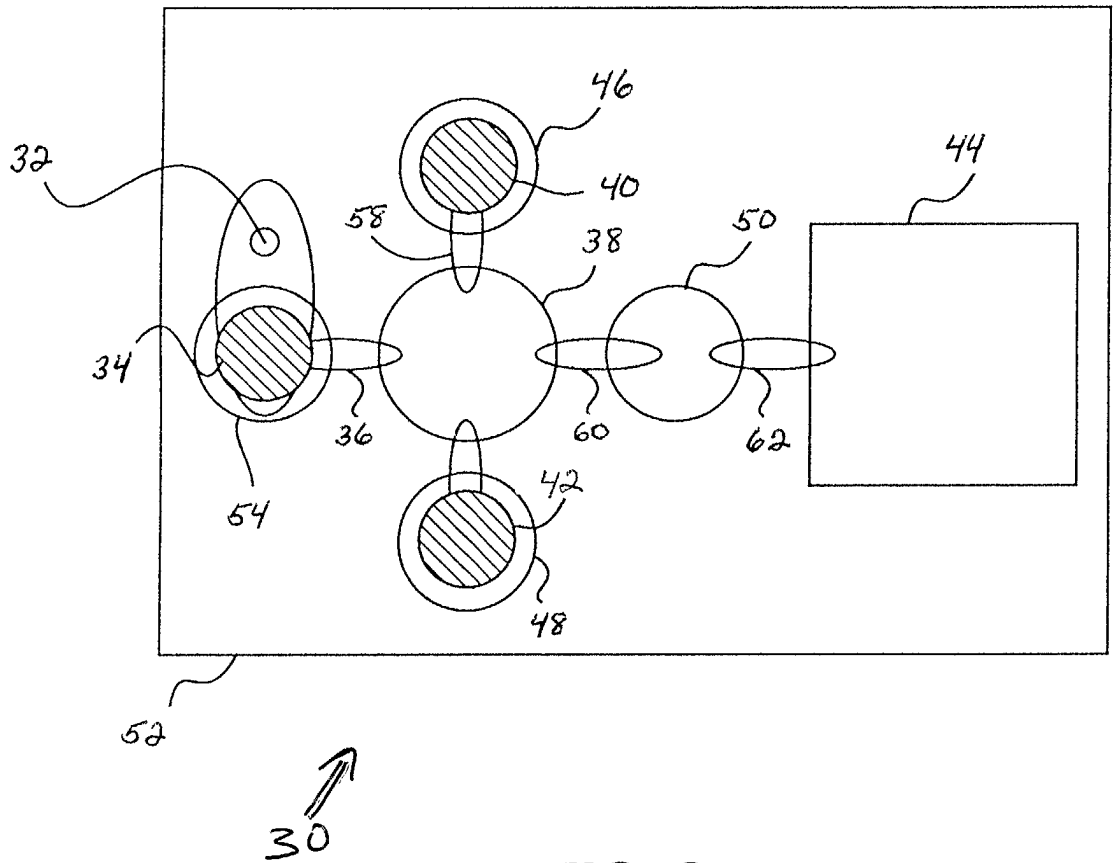

FIG. 2

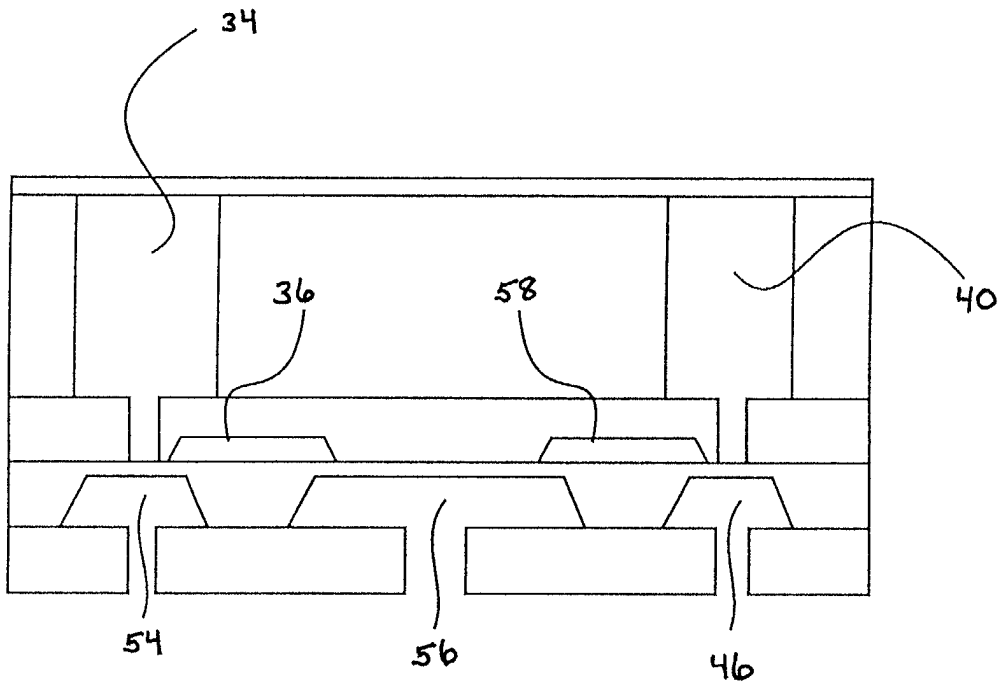

FIG. 2A

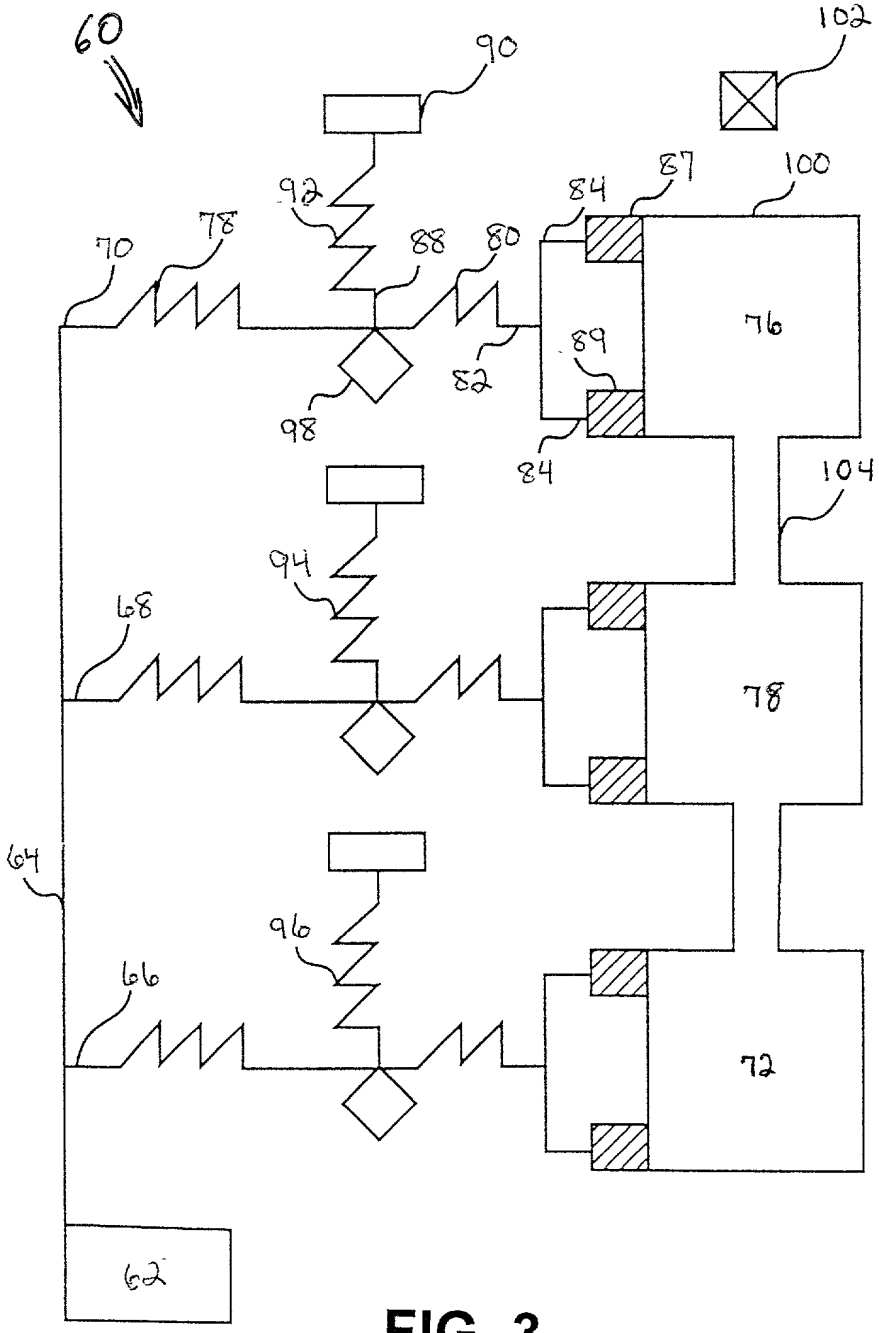
60
90
102
92
84
87
100
70
78
88
80
76
89
82
98
84
104
94
68
78
64
96
66
72
62

FIG. 3

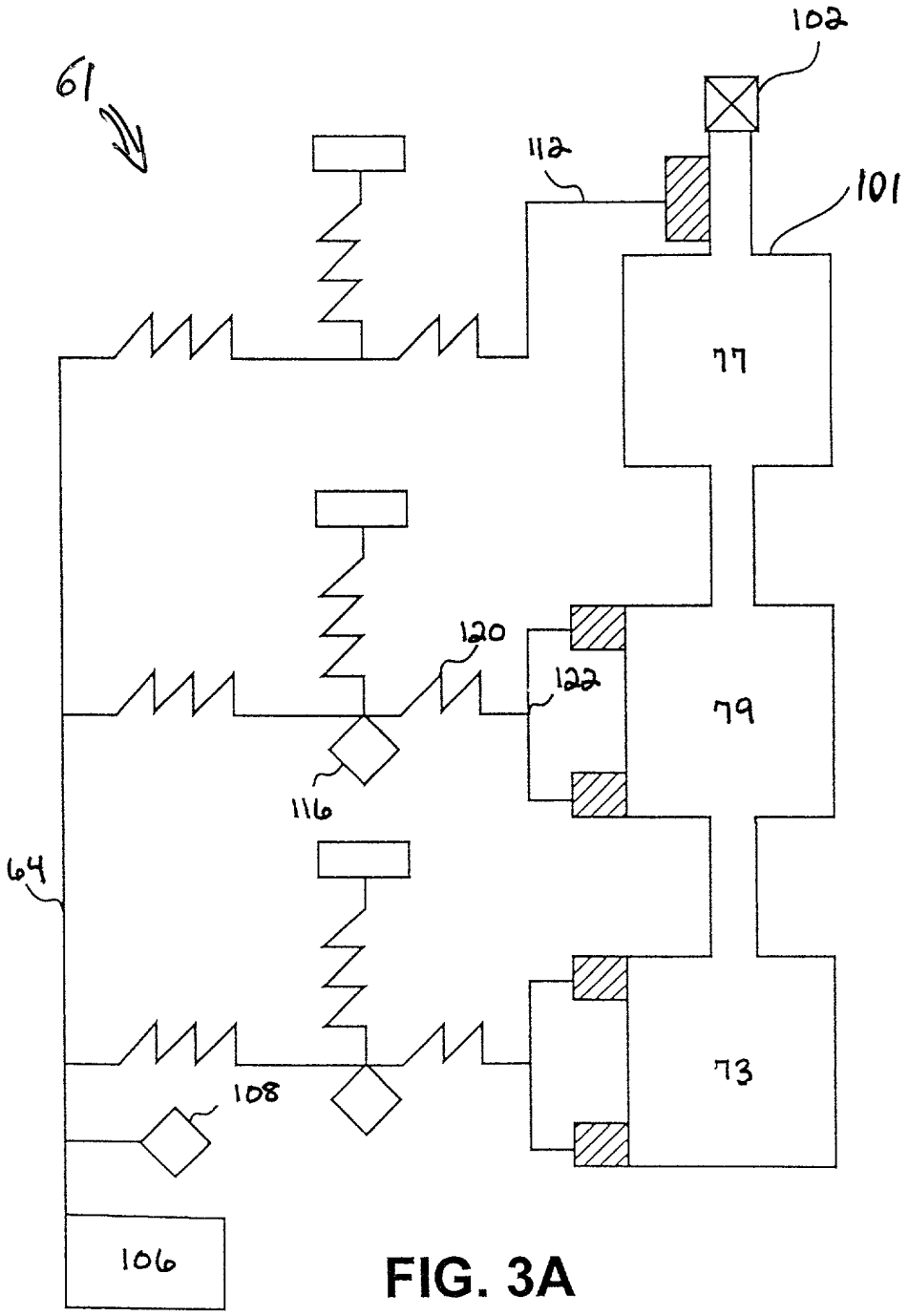

FIG. 3A

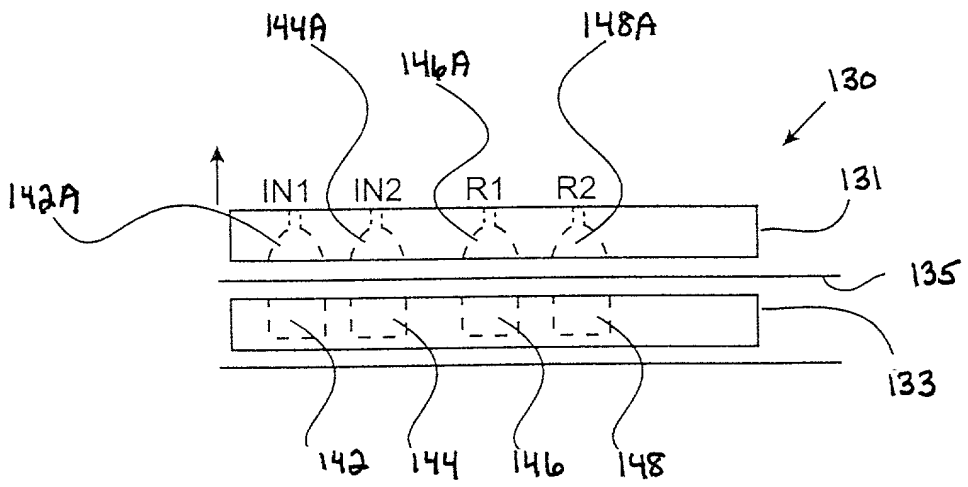
144A
146A
148A
130
142A
IN1
IN2
R1
R2
131
135
133
142
144
146
148

FIG. 4

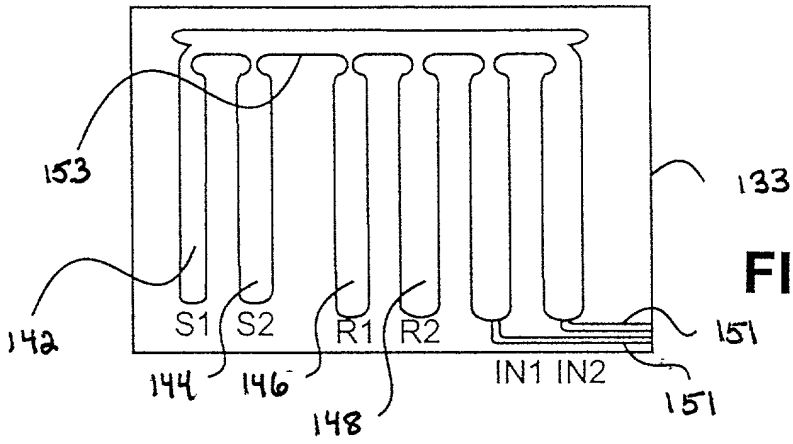
153
133
142
S1
S2
R1
R2
151
144
146
148
IN1 IN2
151

FIG. 4A

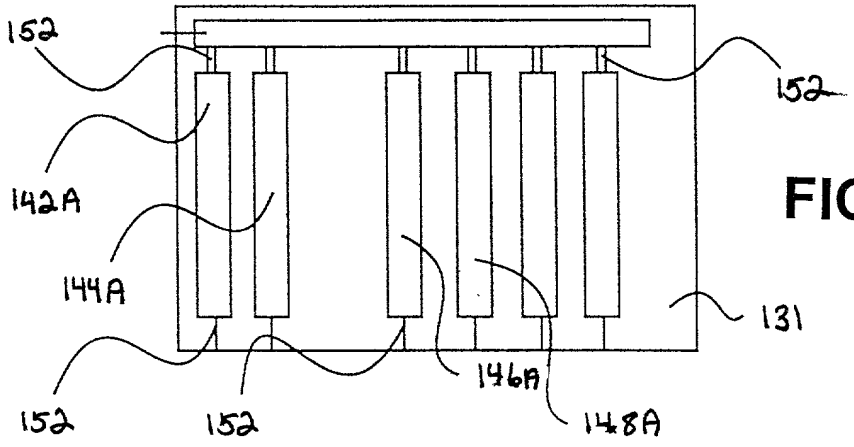
152
152
142A
144A
131
152
152
146A
148A

FIG. 4B

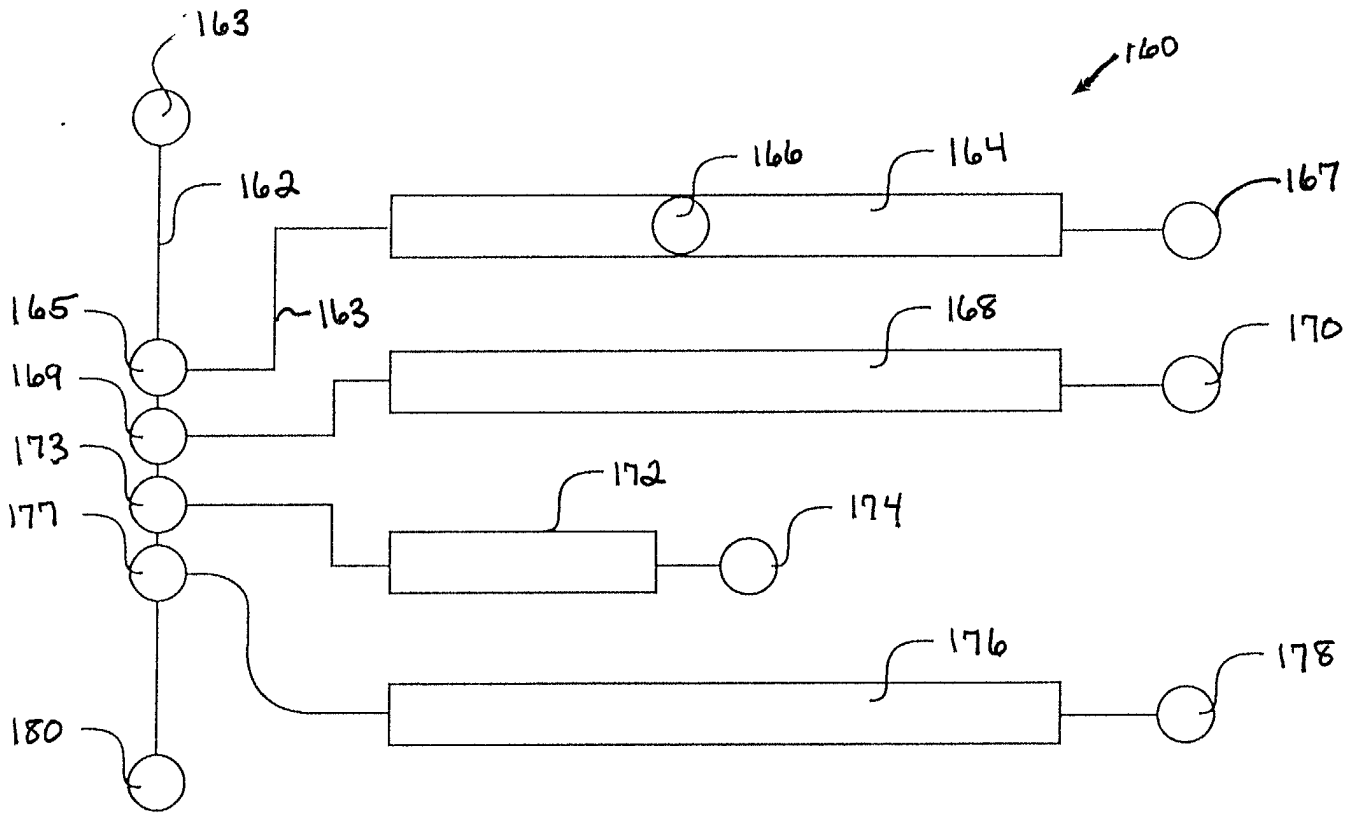

FIG. 5

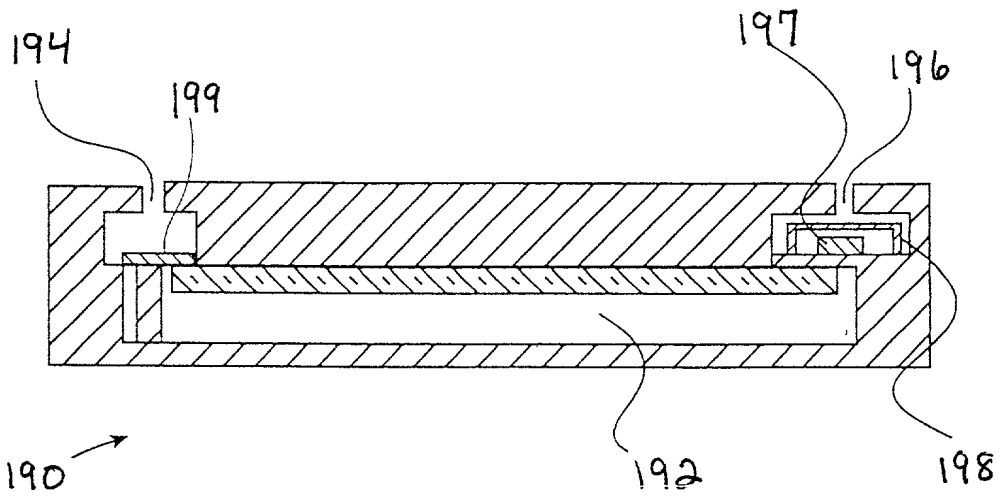

FIG.5A

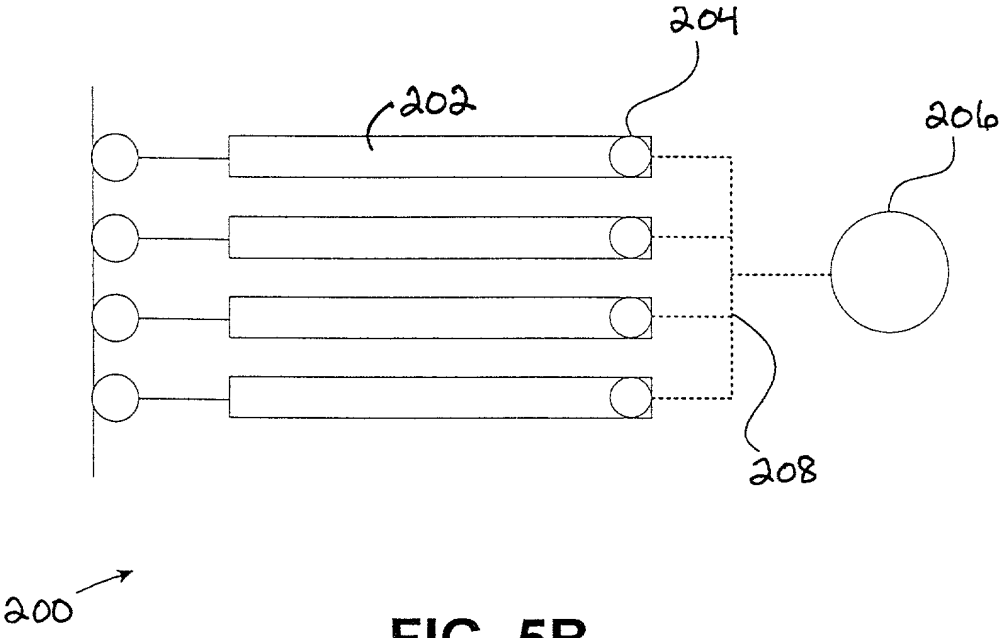

FIG. 5B

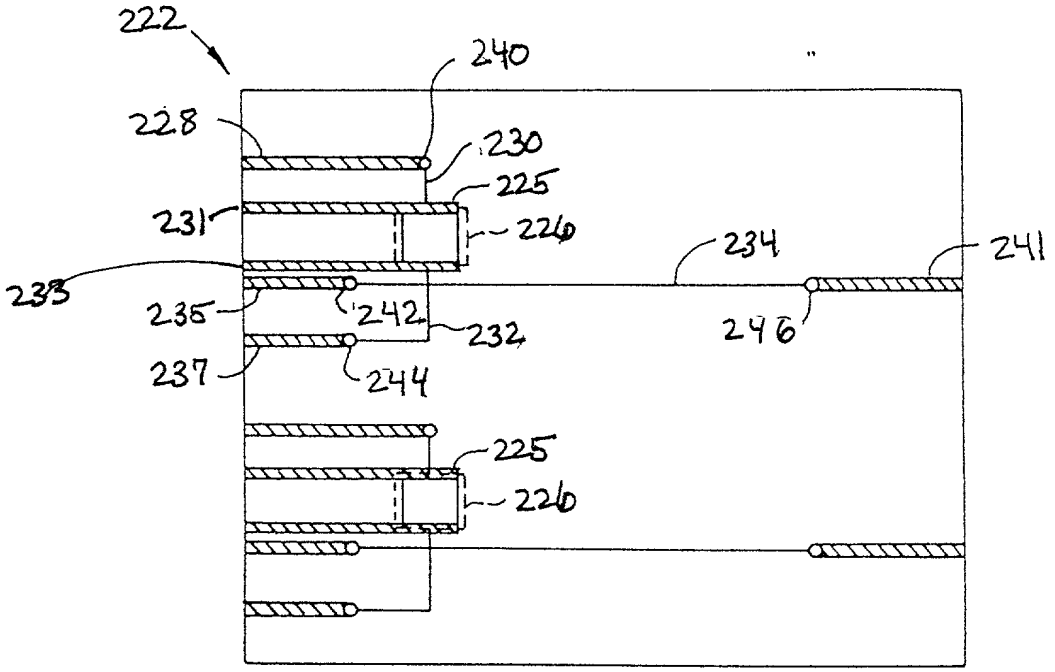
222
240
228
230
225
231
226
234
241
233
235
242
232
246
237
244
225
226

FIG. 6

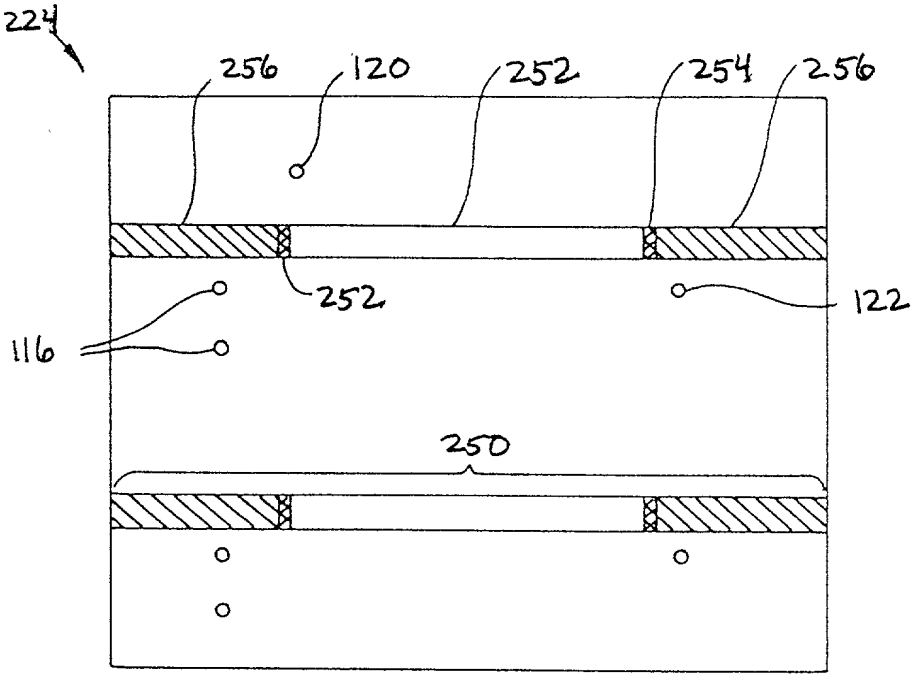
224
256
120
252
254
256
252
122
116
250

FIG. 6A

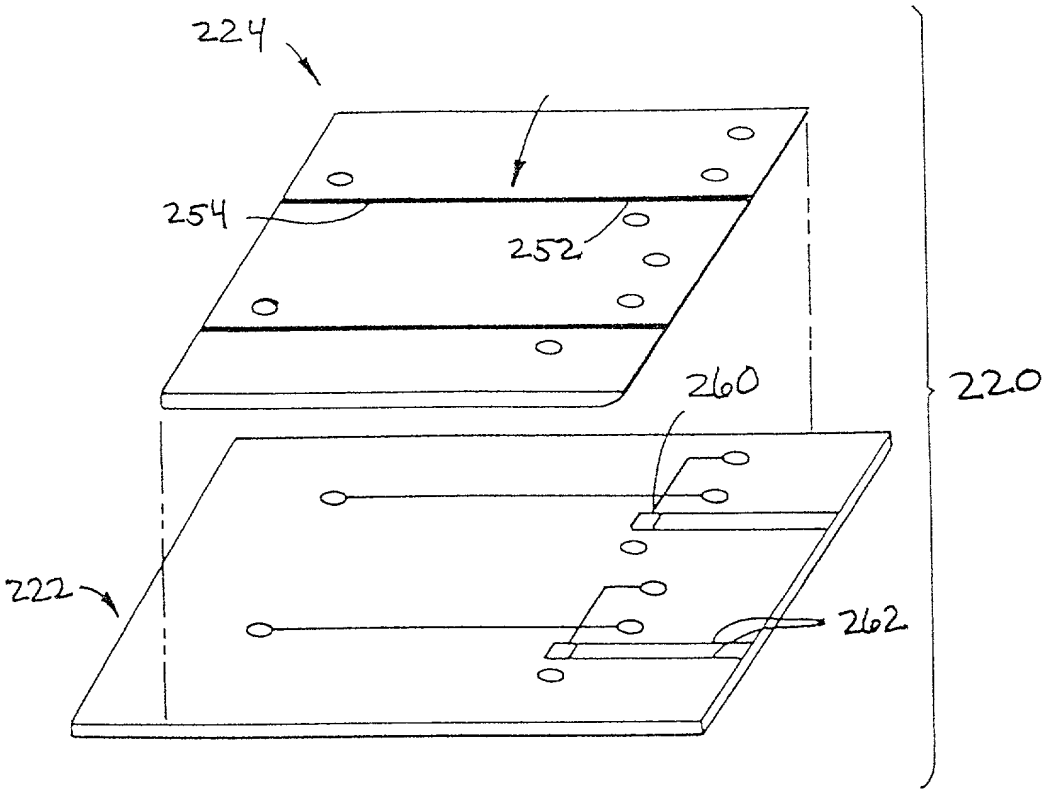

FIG. 6B

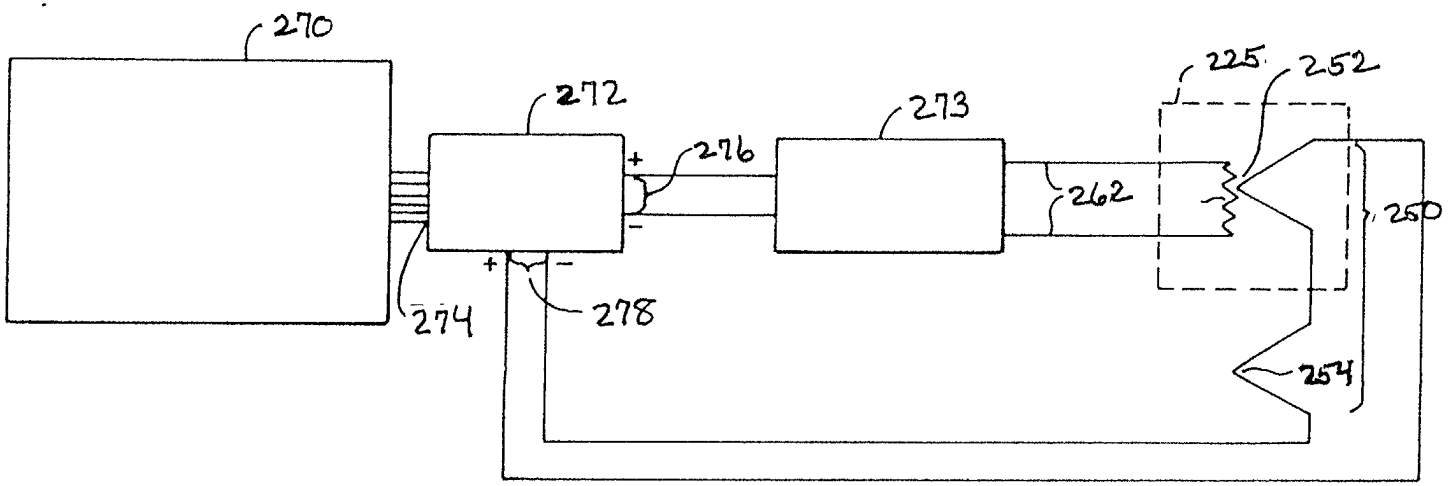

FIG. 7

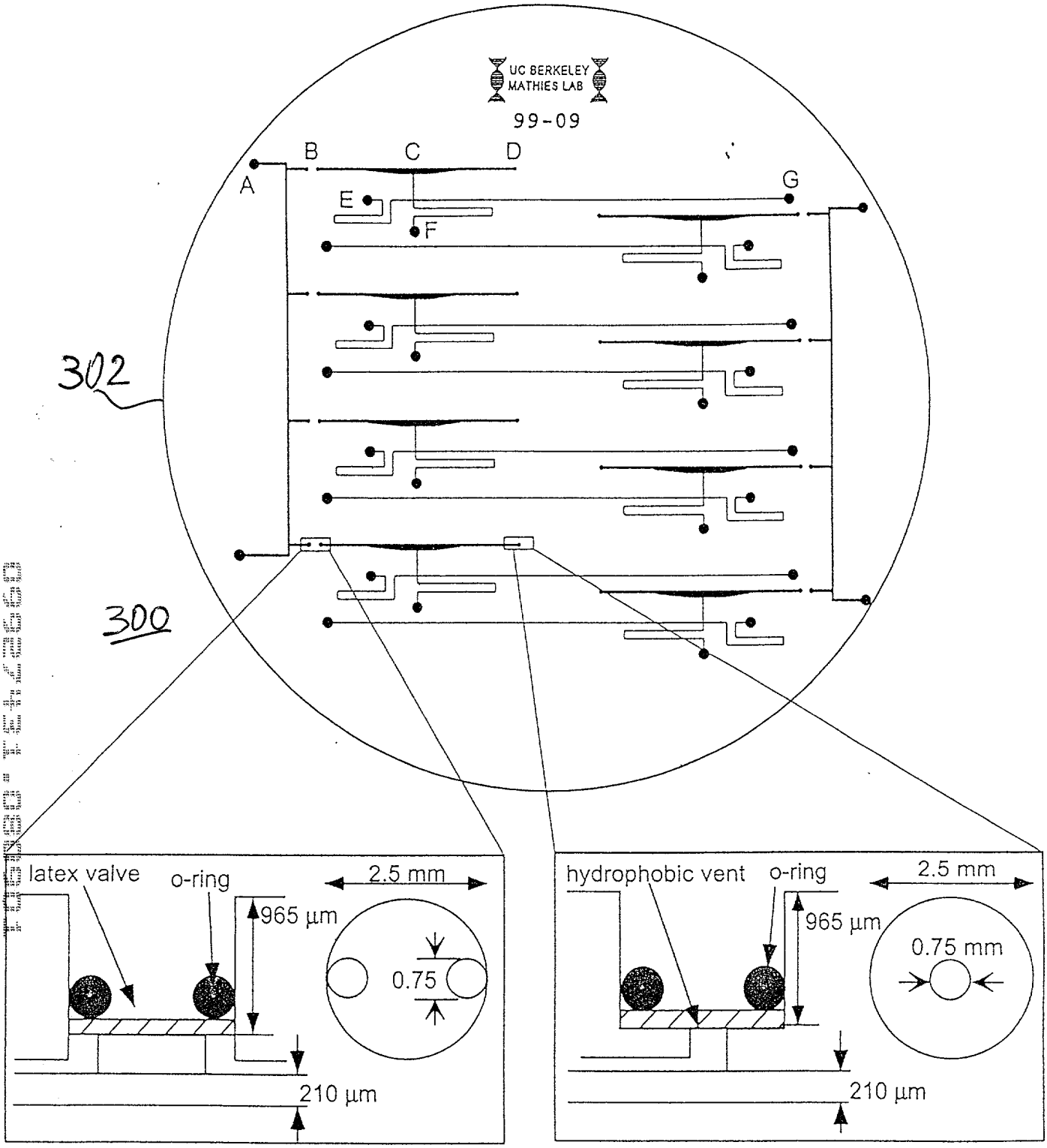
UC BERKELEY
MATHIES LAB
99-09
A
B
C
D
E
F
G
302
300
latex valve
o-ring
2.5 mm
965 µm
0.75
210 µm
hydrophobic vent
o-ring
2.5 mm
965 µm
0.75 mm
210 µm

FIG. 8

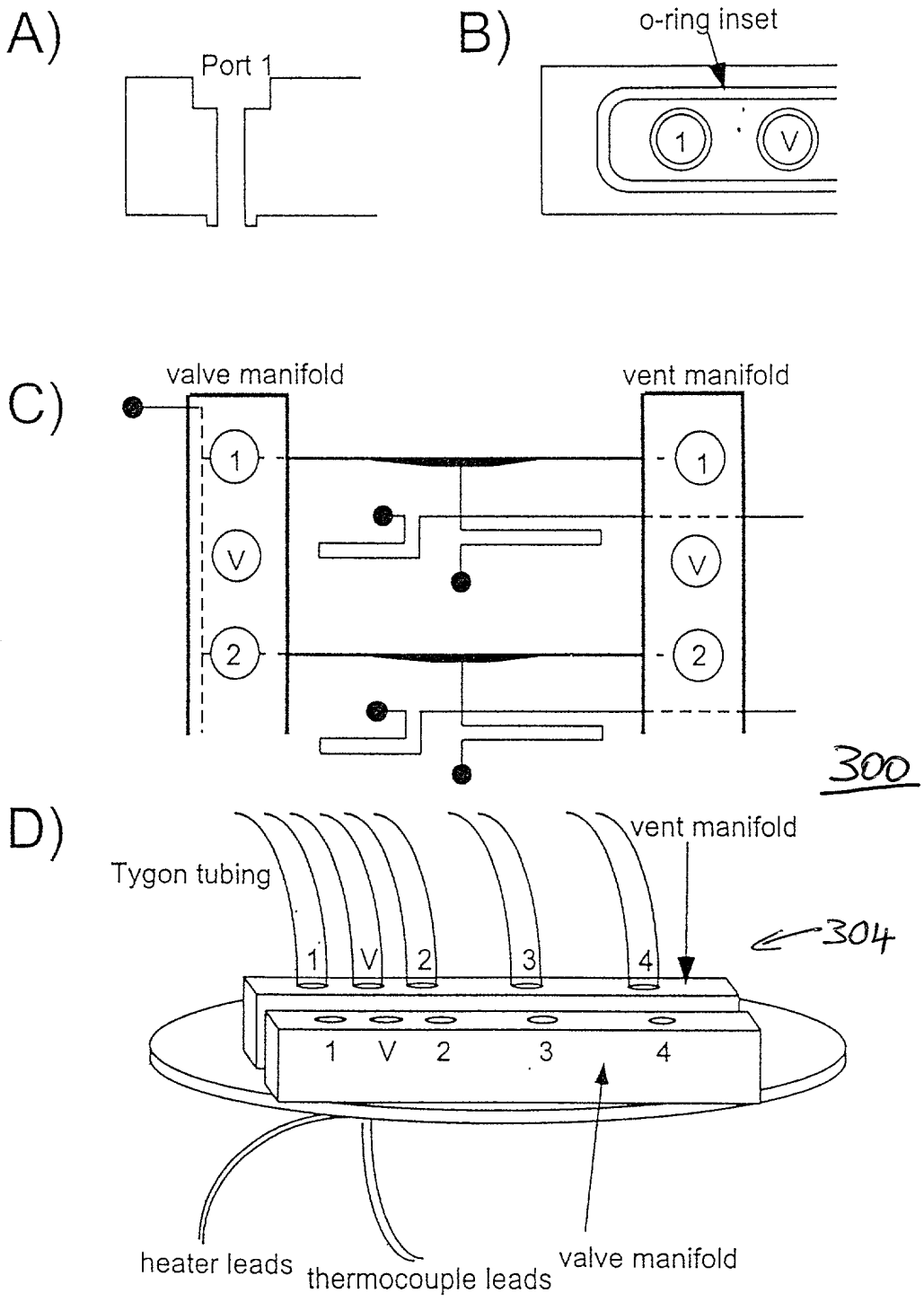
A)
Port 1
B)
o-ring inset
1
V
C)
valve manifold
vent manifold
1
V
2
1
V
2
300
D)
Tygon tubing
vent manifold
304
1
V
2
3
4
1
V
2
3
4
heater leads
thermocouple leads
valve manifold

FIG. 9

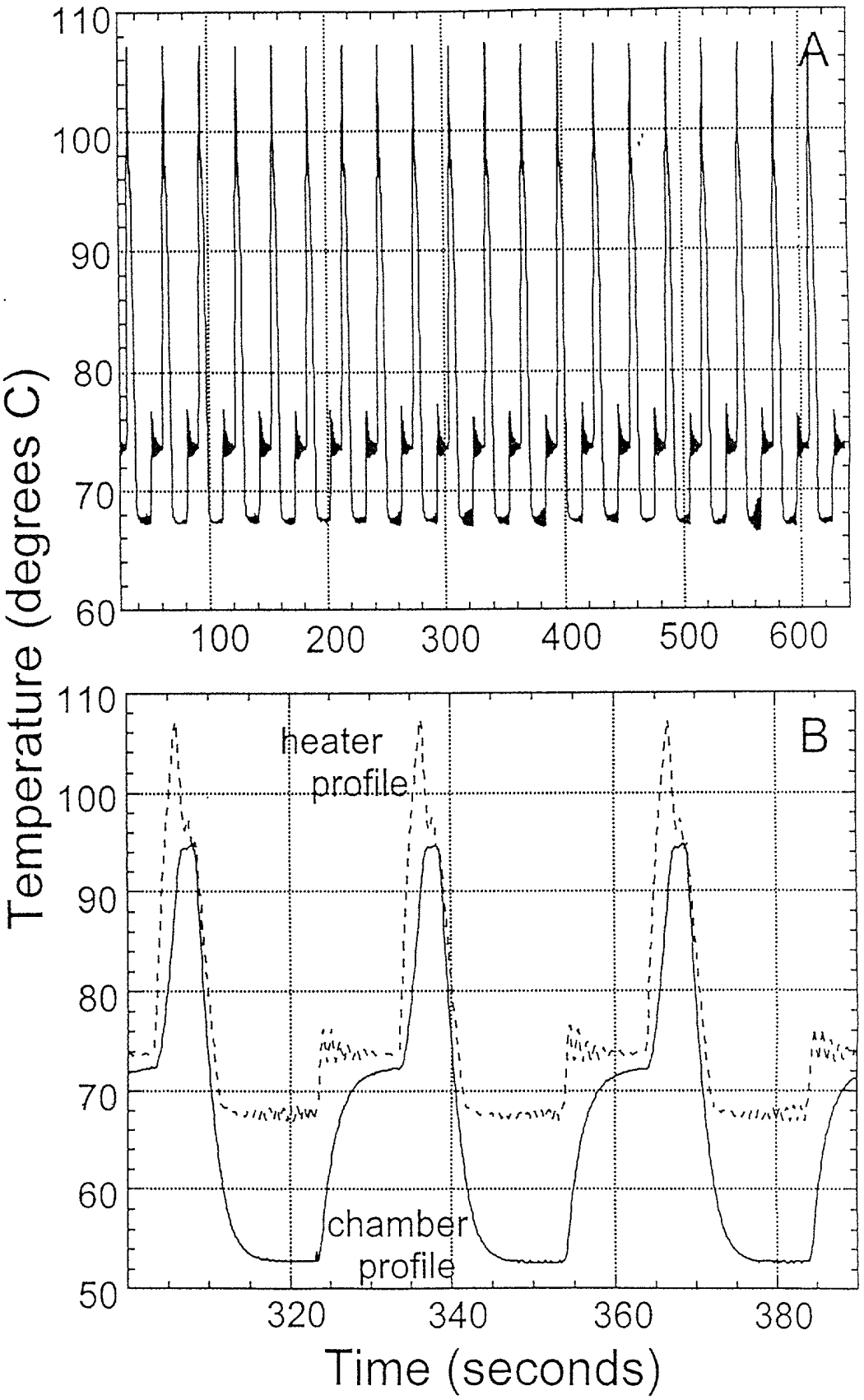
A
B
110
100
90
80
70
60
50
100
200
300
400
500
600
320
340
360
380
heater
profile
chamber
profile
Temperature (degrees C)
Time (seconds)

FIG. 10

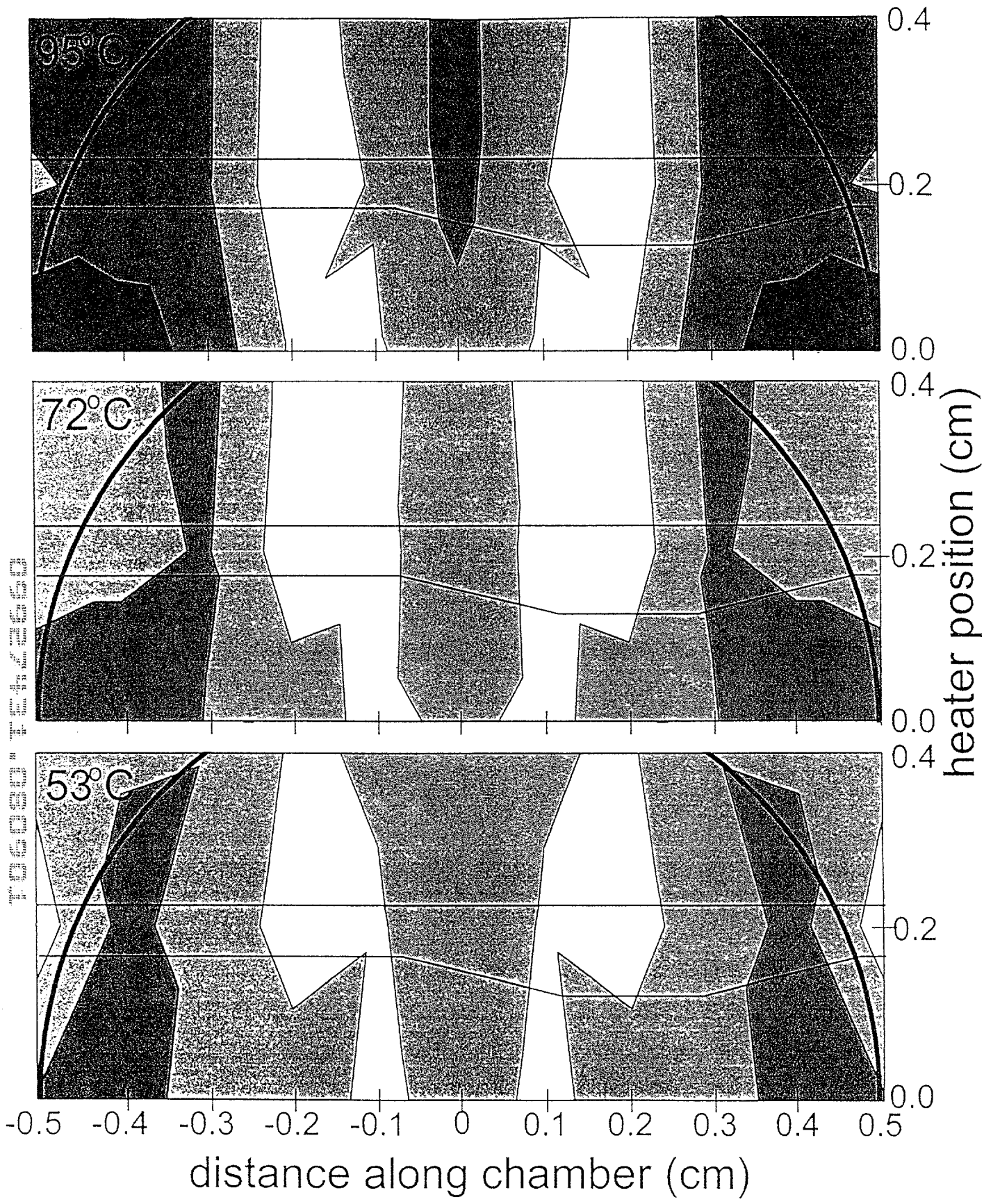
95°C
72°C
53°C
0.4
0.2
0.0
heater position (cm)
-0.5
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
0.5
distance along chamber (cm)

FIG. 11

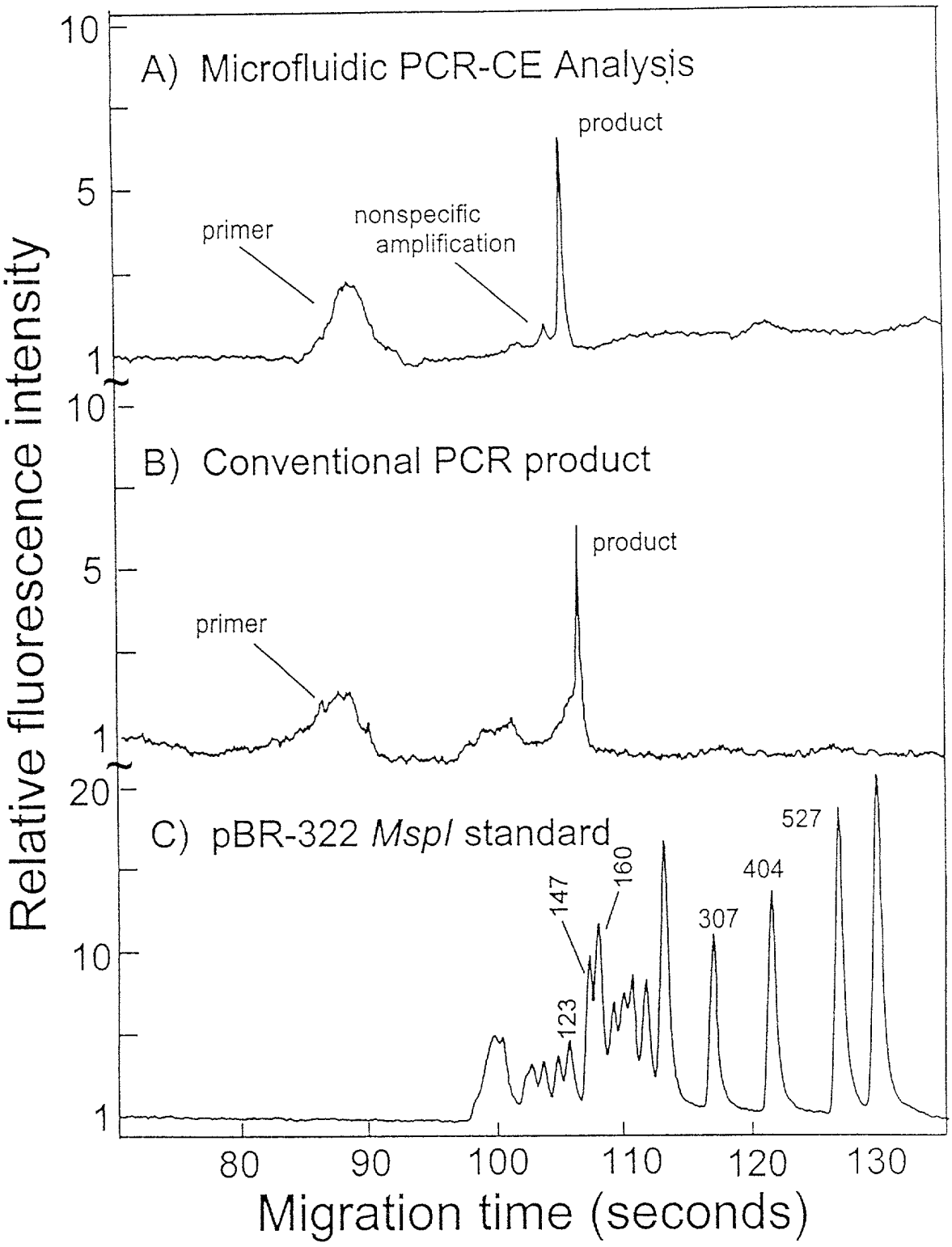
A) Microfluidic PCR-CE Analysis
product
primer
nonspecific amplification
B) Conventional PCR product
product
primer
C) pBR-322 MspI standard
527
404
307
160
147
123
10
5
1
10
5
1
20
10
1
Relative fluorescence intensity
80
90
100
110
120
130
Migration time (seconds)

FIG. 12

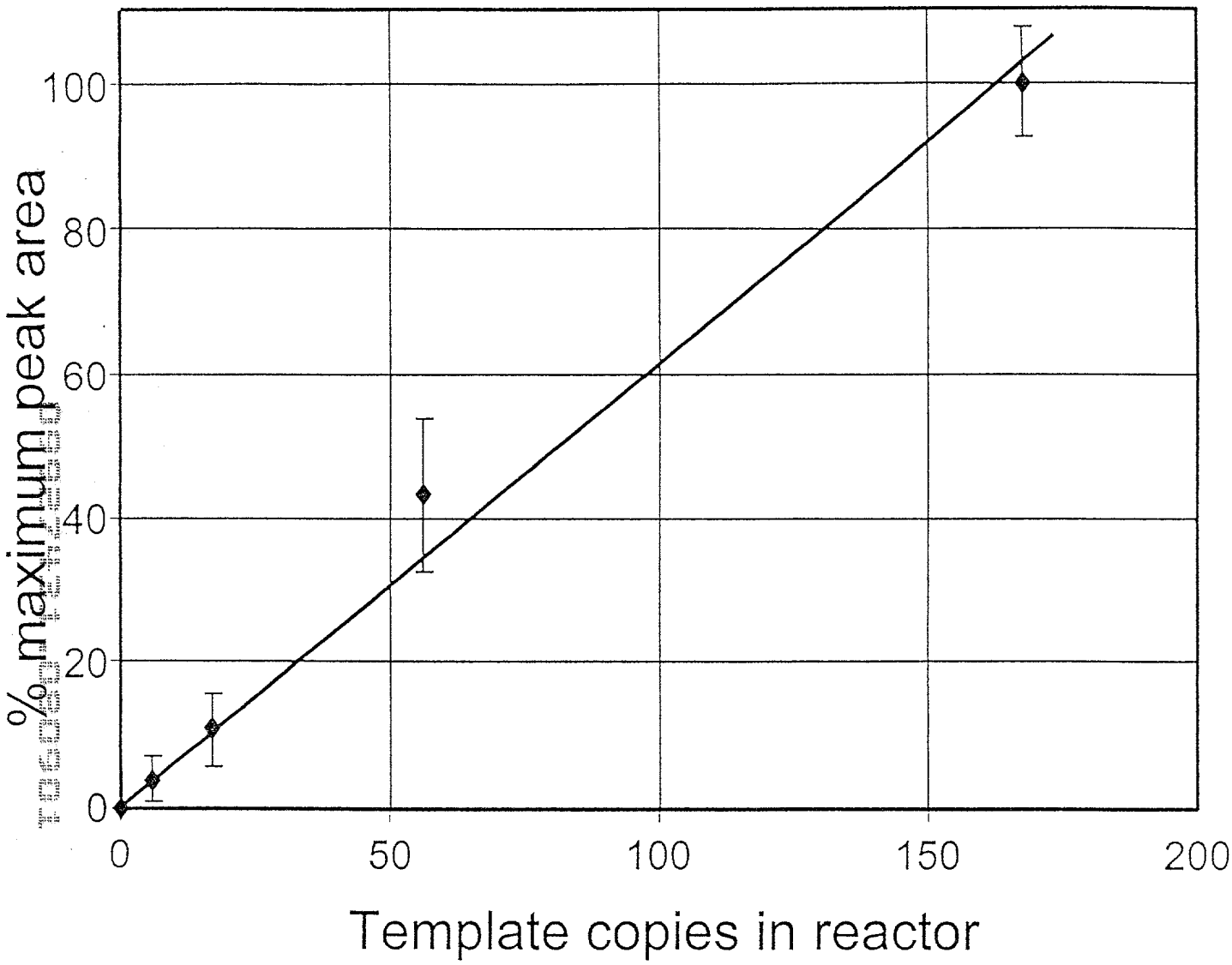
% maximum peak area
0
20
40
60
80
100
0
50
100
150
200
Template copies in reactor

FIG. 13